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positive to the overall U.S. economy send some of that surplus overseas

HuffPost reader stories about fracking

Landman Report Card

"mandatorily pooled"

simultaneous development of wind and natural gas

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Fracking In Pennsylvania Sets Up Dilemma For Locals: Quick Money Or Long-Term Health Concerns?

Lynne Peeples

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POINT MARION, Pa. -- Dave Cogar counts down the days until he's fracked.

Through a haze of cigarette smoke at the Brass Rail bar here, he laments about living on welfare. He still finds jobs where he can -- working construction or fixing computers around this small town south of

Pittsburgh -- but he says he's fallen short of creating the life he wants for himself and his teenage son.

So he's come to the conclusion that natural gas hidden in the Marcellus Shale, thousands of feet beneath his rural Pennsylvania land, may offer him a second chance.

About a year ago, he signed a lease with Chevron, one of a handful of energy companies vying for rights to tap the abundant underground gas in this area. Now Cogar awaits an anticipated windfall of up to \$300,000 a year for the next decade or so, according to his own estimates using figures a lease salesman ballparked for him, as well as the written conditions of his lease. The money won't flow in until Chevron starts injecting pressurized fluids into the ground to fracture shale rock and forage for gas, the controversial process known as "fracking," but Cogar believes it will happen soon. Chevron declined to discuss the details of their agreement with Cogar.

"It should be safe, and the money looks good. Now it's just the waiting. Like Tom Petty says, that's the hardest part," said the bald-headed and goatee-chinned Cogar between sips of beer. He began belting lines from the song -- and other Petty classics -- a few moments later, attracting the attention of fellow bar patrons.

The natural gas rush is on in Pennsylvania, as well as in a growing number of other shale gas-rich states such as Texas, Wyoming and Colorado. New York and Illinois are primed to join in. For residents living near the drilling, the easy money to be had by ceding their land to drillers often competes with their concerns about drilling's impact on their health and well-being.

The Huffington Post's own reporting, conducted on the ground and through digital call-outs to local residents, shows a wide range of opinions about fracking. Surveys support that split over the boom.

Yet, because the industry is still so new and the implications of what it does are still not completely understood, the overriding reality is that residents are making monumental decisions about their own and their neighbors' long-term health without complete information. Because drillers themselves, as well as researchers and analysts, don't fully know what the long-term impact of fracking will be, any resident's decision in the here-and-now is a dice roll.

Fracking, in the long haul, may prove to be no more risky than swimming in the ocean. On the other hand, fracking, like tobacco use decades ago, may be much more dangerous than average citizens currently undertand it to be.

The tension created by these competing considerations, and the schisms formed within communities by an uneven distribution of profits and problems, are hinted at in the new film "Promised Land."

Theater-goers around the country recently got their first glimpse of John Krasinski's character, Dustin Noble, singing karaoke, like Cogar, in a Pennsylvania pub called Buddy's. The stellar Springsteen rendition helps the activist convey his concerns about natural gas drilling to the local crowd. Noble has apparently come to the fictional town of McKinley to stop landmen from weaseling landowners into leases and to warn that drilling, hydraulic fracturing and the other phases of natural gas production are not as safe or as lucrative as the energy companies would lead them to believe. He claims to be a victim himself: Most of the cows on his father's Nebraska dairy farm, he says, died after a corporation fracked the land.

"All the land just died. Shriveled up and turned brown," says Noble in the movie. "Making it very easy to see the only things left standing, giant green tanks that said 'Global."

Anti-fracking activists have, predictably, cheered the film. Diane Sipe of Marcellus Outreach Butler, an advocacy group based in Butler County, Pa., just north of Pittsburgh, has distributed leaflets locally comparing McKinley to Butler and citing a list of concerns that includes the contamination of drinking water by fracking's toxic byproducts and possible industry buy-offs of disgruntled landowners.

The natural gas industry has its own concerns about "Promised Land."

"This film is purely a work of fiction and is not reflective of the work our industry undertakes," says Marcellus Shale Coalition spokesman Steve Forde. His trade group, backed by such major energy companies as Chevron, XTO and Range Resources, has sponsored a 16-second preview ad in Pennsylvania theaters that they hope will lead viewers to the "real facts" -- such as the economic benefits of tapping America's own abundant energy source to lessen our reliance on imports and to help reduce natural gas prices.

John Stolz, a biology professor at Duquesne University in Pittsburgh, has been tracking the natural gas industry's growth in the region for the past few years. In 2005, he says, not a single Marcellus well had been drilled in Hickory, Pa. By 2010, the town

hosted more than 100 operations.

"Now, that figure has doubled," he said. "It's remarkable."

LIGHTING A FIRE

As Cogar stops singing, the Brass Rail's patrons return their attention to the TV screen above the bar and to the bartender, Charlene Bryner.

Bryner has just watched iPhone footage of a local spring lit on fire due, according to the landowners, to gases released by natural gas wells. She has also just heard for the first time about a pattern of health problems residents believe are related to fracking across Point Marion and the rest of Fayette County, Pa.

Although the spring fire took her by surprise -- as did word of the suspicious rashes, coughs and headaches that residents blame on air and water pollution associated with fracking -- she said she had already noticed that a "nonstop convoy" of heavy trucks the industry had sent down Main Street outside her bar had left a number of potholes in the pavement.

Each natural gas well requires thousands of truck trips to deliver some 5 million gallons of fresh water and up to 4 million pounds of sand that are combined with chemicals to form the fracking fluid. More trips are needed to carry away the resulting wastewater from the hundreds of wells that dot the landscape of Fayette County.

It's true that the arrival of the natural gas boom has also brought an influx of money into Point Marion, according to Bryner, even if the natural gas workers tend to be from out of town.

"Most of them are here from Texas," she said, noting that the six-room motel adjacent to Brass Rail has stayed full since the gas companies' arrival. "Not many locals get the jobs."

Fawn Stephens says she has felt the brunt of the locals' frustrations over that fact. She and her husband are in town from Kentucky while he works laying natural gas pipeline.

"It's good money," she said. "Sure beats him making \$15 an hour back home." He's making more than double that today.

While the laid pipes are mostly invisible underground, widespread rigs are telltale, albeit temporary, signs of the industry's presence across this rugged landscape. Driving the winding, steep backroads, the rigs can appear almost out of nowhere. Lit up at night, it looks as though midtown Manhattan has sprung up in the middle of rural America.

The drilled and fracked well itself is just one component of a natural gas operation. Also involved are convoys of trucks, miles of pipes, flare stacks, gas compressor stations and open containment ponds to hold wastewater that flows back up from a fracked well with an array of natural elements and fracking chemicals, some of which companies are not required to disclose.

Both sides of the fracking debate make a case that the science is settled on whether any aspect of the operation can contaminate the air and water.

"There are no credible reports of any air, water or other pollution caused by fracking anywhere in America," Phelim McAleer, director of a new documentary, "FrackNation," told The Huffington Post. "It's been going on in America for 60 years."

Like McAleer's prior films that downplayed environmental concerns, "FrackNation" pushes back against the anti-fracking movement, including the Oscar-winning documentary "Gasland." The Irish filmmaker remains a vocal proponent of fracking and critic of those opposed off-screen as well. Last week, he confronted Yoko Ono, Susan Sarandon and other artists on a bus tour of northeastern Pennsylvania communities affected by fracking.

Fracking proponents such as McAleer can point to a recent study that found no evidence of contamination in drinking water wells around the Fayetteville Shale area in Arkansas, where 4,000 wells have been drilled since 2004. They can also cite the Environmental Protection Agency's declaration in July that the water in Dimock, Pa., was safe to drink -- after years of citizens and anti-fracking activists proclaiming just the opposite.

But fracking's foes, who point out that the type of fracking done today is very different from what was done half a century ago, also have their arsenal of facts and studies.

For one, there's the use of the term "fracking." While its popular use has come to encompass the entire process of natural gas production, fracking technically refers only to the moment in which fluid is injected underground to release the gas. In other words, to say fracking isn't responsible for contamination may be twisting the truth, suggests Josh Fox, director of "Gasland."

Earlier this month, researchers from the University of Colorado in Boulder released findings that oil and natural gas wells north of Denver add to ozone pollution in that region, and that methane leaks at rates as high as 9 percent from fracking sites in Colorado and Utah. Across the border in Wyoming, both the U.S. Geological Survey and the Environmental Protection Agency have concluded that fracking chemicals tainted drinking water in the town of Pavillion.

Environmental groups and landowners have suspected -- but not yet proven -- similar contamination in parts of Texas, where natural gas production has been underway for more than a decade. On Jan. 16, the Associated Press reported that EPA regulators "set aside an analysis that concluded the drilling could have been to blame for the contamination" of a family's drinking water in Fort Worth, Texas, after Range Resources "threatened not to cooperate" with a national study on fracking.

When asked about these allegations, the EPA told The Huffington Post that the agency "does not discuss such case-support information that informs our enforcement decisions." The agency added that "resolving the lawsuits with Range Resources allowed EPA to shift the agency's focus in this case away from litigation and toward a joint effort on the science and safety of energy extraction."

The EPA's hydraulic fracturing study is one of many current efforts to better understand the potential long-term impacts of the booming industry. Still, many opponents say their own direct experiences have left them convinced of the dangers. The Headleys of Springhill township in Fayatte County, Pa., feel they have dealt with just about every potential consequence of fracking -- from a spring that bubbles and flames when lit by a match to formerly lush fields that now stay brown.

The Pennsylvania Department of Environmental Protection tested the Headleys' drinking water in April 2010 and found low levels of barium and manganese, among other contaminants, but determined it was safe. The family wasn't convinced. As HuffPost previously reported, they now believe the test results provided by the DEP were incomplete.

"Out of five wells, we have three leaking some kind of crap," says Linda Headley, who was recently diagnosed with asthma.

Their youngest son, Adam, struggles with chronic stomach aches, coughs and rashes. Their eldest, Grant, recalled a teacher referring to fracking during class as a "perfectly safe" process of getting gas out of the ground. "I told her, 'You're full of crap. Fracking is why my whole family is sick," recalls Grant, a high school junior. "I thought I'd have to go to the principal's office."

He never had a visit with the principal. But he said that shortly after the confrontation, a few of his classmates revealed stories of their own family's fracking-related troubles to their class.

CONFLICTED COMMUNITIES

A stroll down Glenwood Ave. in Evans City, Pa., offers a taste of the widespread division over fracking. A natural gas operation sits a few hundred feet away, between the residential street and a dairy farm.

Through a half-open front door, Michele Weiss says she thinks that harvesting the natural resource is well worth any compromises.

"I'm all for it," she says clutching a small dog, larger dogs barking at her feet. "I'd rather we rely on our own fuel than on international sources. The whole U.S. benefits."

Matt Damon's character in "Promised Land" is a land buyer for an energy company, and he also emphasizes energy independence in negotiations with potential customers. "We send more than \$1 billion overseas every day to fuel our need for oil," he says. "Now that's just insane -- when we have one of the largest natural energy sources right here in our back yard!"

That sentiment is reflected throughout this region. Above the escalators down to baggage claim at the Pittsburgh International Airport hangs a large banner for a major natural gas company, Range Resources. (The same company that the AP suggests may have bullied the EPA in Forth Worth.) It reads: "Economy ... Prepare for take off." Television commercials paid for by the industry repeat similar messages.

When asked about the AP's claims, Range Resources spokesperson Matt Pitzarella said that the story was "misleading," and emphasized that there was not enough data to pin the water contamination on natural gas production. As for the suggestion that Range Resources threatened the EPA over participation in a national study, Pitzarella notes that the company was in a "legal dispute" with the EPA and had simply "suspended voluntary participation in projects" until that was settled.

"We would welcome the opportunity to help the public better understand natural gas development, which we think is critical for the nation to maximize the immense benefits this resource presents," he said, highlighting the fact that Range Resources was the "first to unlock the Marcellus Shale" and remains an active natural gas producer in Pennsylvania.

A report that the Congressional Research Service, which provides policy and legal analysis to the U.S. Congress, published in November also seems to support the industry's sales pitch: "Given existing data, most indications point to the changes in the natural gas industry as positive to the overall U.S. economy."

Natural gas currently provides about a quarter of the electricity in the U.S. And the escalating supply is keeping prices low. Now, the industry is pressuring the White House to greenlight plans to send some of that surplus overseas, according to various news reports.

If we don't roll with natural gas, "FrackNation" director McAleer said, "everyone is going to lose."

"People are going to pay more for fuel," he said. "People are going to lose jobs. Farmers will lose their land."

In addition to the contributions to individuals' pocketbooks, the industry prides itself on being a "good neighbor" and investing financially in the communities where it operates.

Leslie Osche, who works for the Butler United Way, has been pleased by what she called "significant contributions." XTO, part of ExxonMobil, has supported the United Way's efforts to provide local housing assistance and school mentoring. In 2011, XTO and ExxonMobil invested \$3 million in higher education, medical care, environmental research and arts and civic organizations in Pennsylvania.

But Osche, too, is well aware of how divisive fracking is in her community: Her own household is split on the issue.

Vince Watson, who lives directly across the street from Weiss on Glenwood Ave., vehemently opposes the industry. He recalled waking up one night to witness the flaring of natural gas. "I thought I was having a stroke," said Watson. "The room was flickering orange, the windows glowed red. The noise was unbelievable."

"We came here because we wanted to hear the sounds of cows," he added. "You feel helpless."

Hear more HuffPost reader stories about fracking.

SOLD SILENT

Men wearing orange work vests recently filed in and out of Hilltop Pizza in Point Marion, as a group of locals talked over a stack of shared pies. Their topic of conversation -- health concerns over local fracking -- attracts the attention of these men on their lunch breaks, many from nearby natural gas sites. Eyes wander, voices fluctuate, as the group shares its concerns with one another.

Deanna Galloway sits at one of the small tables at the front of the restaurant. She used to drive wastewater trucks from fracking operations and says she now suffers from massive headaches, among other ailments. "Lines would break and I was sprayed several times," says Galloway. "I had no idea I was being exposed to water so toxic."

Jerry Yeager is also at the table. He lives a few hundred feet from a compressor station, next to a fracking site down the hill from here. Yeager notes that the smell can be a "horrific" mix of bad clorox, ammonia and turpentine. "I'm spitting it out, the smell is so bad," he says.

Yeager and his wife have frequent bouts of nausea, as well as vision, respiratory and neurological problems. One of their grandchildren, while visiting over the holidays, woke up screaming that he couldn't breathe, recalls Yeager.

Just as most of the fracking wells around Fayette County remain "hidden behind knobs, bumps and hills," as Yeager says, the crowd at the pizza parlor notes that there are far more untold stories. In fact, they say, many of the people who have experienced the worst are the same people who are now keeping quiet -- either out of fear of being ostracized from the community, they say,

or of losing paychecks from the industry. Such settlements can range anywhere from hundreds to more than a million dollars, depending on the property and "how anxious the litigants are to settle," said Duquesne's Stolz.

"If a family has successfully settled with a company, that information is part of the settlement," Stolz added. "That is pervasive throughout the industry. People are petrified because they don't want to lose their settlement. I can't blame them. Their lives have been turned topsy-turvy."

Then there's Ron Gulla, who says he lost his farm in Hickory, Pa., to natural gas production.

"They tried to throw more money my way to shut me up, when they bought my farm and wanted me to go away," recalled Gulla of Range Resources. "I said, 'No. I'm not shutting up."

Gulla never signed a nondisclosure agreement, and says he's chosen to stay vocal to help protect others from the same kind of devastation he experienced after signing a lease in 2002 -- one of the very first for the Marcellus. He details the contamination he discovered on his old property, from feces of site workers to leaking wastewater pits to spills from trucks.

Pitzarella of Range Resources denies the company ever mentioned a nondisclosure agreement with Gulla. He calls Gulla's story "a carefully crafted tale of greed," and points out that "all environmental matters were thoroughly investigated by the DEP and none of those claims surfaced until his dispute with us over money."

Kevin Sunday, a spokesperson for the Pennsylvania DEP, confirmed that the alleged contamination was not found to be the result of drilling or fracking. "The majority of complaints we do receive do not result in a determination that drilling impacted the water supply," said Sunday.

"Gulla is wildly out of the mainstream and deserves zero credibility," Travis Windle, a spokesperson for the Marcellus Shale Coalition, wrote in an email to HuffPost.

Such a reaction from the coalition didn't surprise Stolz. "He's uncovered so much stuff about the industry that they want to discredit him," he said. "Ron has traveled from West Virginia to Ohio to New York and has gotten more people to step forward to let other people know that they have problems. All these people thought they were alone -- that it had only happened to them."

SELLING SHALE

George Watson of Greene County, Pa., recalled the "nice young lady" who showed up at his door one day in June 2008, eager to get him to lease his land.

The Hindleys can still picture the shiny cowboy boots worn by their visitor -- a salesman of right-of-way leases for natural gas pipeline. "I could tell they were for show," said Linda.

Debbie Bell remembered the "very personable" man that had come for her mother's land in Tarentum, Pa. "He was kinda like the character in the movie," she said.

In "Promised Land," when Damon's character first arrives in the struggling town of McKinley, he buys new flannels and rents a used Ford Bronco. Combined with a natural charisma, he seems to puts townspeople at ease. He also seems to believe himself when he says, "I'm not selling them natural gas, I'm selling them their only way to get back."

But when Jason Bell, Debbie's son, heard the Damon character promise a landowner "millions" of dollars in royalties, he says he couldn't help but utter "bullshit" in the theater.

He knows the difficult situations faced by homeowners and local officials in his community when "vast amounts of money" are promised, Bell says. Fresh in his mind is the encounter between the landman and his family.

Bell says an XTO landman, Andy Hazlewood, approached his 90-year-old grandmother early last year to sign a lease. Bell's mother, Debbie, went to speak with the landman herself. When asked what would happen if her mother didn't sign the lease, Debbie recalled Hazlewood explaining how a concept called "forced pooling" could allow his company to drill anyway. She said he then warned her that her mom could end up losing any compensation.

Debbie did her research. Turned out, "forced pooling" didn't apply and she called out Hazlewood via email. In his reply, according

to emails that Debbie shared with The Huffington Post, he admitted that he got "mixed up."

"The unfortunate part about oil and gas laws with them being so grey it's difficult to decipher at times," wrote Hazlewood. "That's why I do my best, and appreciate when others communicate with me. I am the first to say that I am not an attorney nor an accountant, I give information and expect people to be educated comsumers and research for themselves (such as you did) to determine their wants and needs."

But, as Debbie pointed out, people like her 90-year-old mother may not have the resources to go about doing their own research.

Hazlewood declined to comment on his interactions with the Bells. Jeffrey Neu, an XTO spokesperson, said that Hazlewood was a contract landman and no longer works for the company.

Chris Csikszentmihalyi, former director of the MIT Center for Civic Media, says that hardball sales tactics are standard practice in the fracking industry. To create a more level playing field for landowners, he has helped create the Landman Report Card, a website that allows people to share information about their personal dealings with the salesmen.

"There are some real doozies on the site," said Csikszentmihalyi, who highlighted one landwoman who told a landowner they would be "mandatorily pooled" if they didn't sign a lease. Much like the Bells' case, such a rule did not apply.

Overall, Csikszentmihalyi said that reports from the Marcellus Shale are relatively positive -- compared to those from places like the Barnett Shale of Texas. "That's probably in part because it takes a while for things to show up," he says. "Initial relationships might seem great: You're gonna get revenue from the well, and they've promised to replace topsoil. It may not become a problem for a couple years."

His theory has some support. Jeffrey Jacquet, now an assistant professor of sociology and rural studies, recently published a paper while a graduate student at Cornell University that compared opinions of residents in a region of Pennsylvania undergoing simultaneous development of wind and natural gas.

"People were fairly ambivalent, if not positive, before gas drilling occurred," said Jacquet. "But the more experience people had with the development, the more negative they seemed to be towards the development. Meanwhile, with wind farms, there was little change in opinion."

In a separate survey out of Texas in 2009, researchers found that residents of a county in which massive natural gas development had just begun were far more favorable to the industry than people living in a county that had hosted intense development for over a decade.

Contamination from any future fracking of the shale beneath his land doesn't really concern Cogar of Point Marion. He's basing his confidence on what he's gleaned from TV, the Internet and from two weeks spent going through the 14-page lease himself while referencing an atlas.

"He was impressed," Cogar recalled of the landman when he told him of the homework he'd done. "He said he'd like to hire me."

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